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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/670,534

09/25/2003

Jinru Bian

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61611 7590 03/30/2007
ROHM AND HAAS ELECTRONIC MATERIALS
CMP HOLDINGS, INC.
451 BELLEVUE ROAD
NEWARK, DE 19713

EXAMINER

MARCHESCHI, MICHAEL A

ART UNIT

PAPER NUMBER

1755

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/30/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/670,534

Applicant(s)

BIAN ET AL.

Examiner

Michael A. Marcheschi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 11 and 13-19 is/are pending in the application.
- 4a) Of the above claim(s) 13-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 11 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/12/06</u> | 6) <input type="checkbox"/> Other: _____ |

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The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

In the following claims, CDO means carbon doped oxide (see section [0063] of the specification).

Claim 1 is objected to because of the following informalities:

Claim 1 is objected to as to the way the grouping for the imine derivative is defined because said group is wordy and is defined in such a manner that could create confusion as to what exactly is part of the grouping. It is suggested that the entire grouping be reworded (i.e. the barrier removal agent is selected from the group consisting of formamidine, formamidine salts, formamidinesulfonic acid, 1, 3-diphenyl guanidine, 1-methyl-3-nitroguanidine, guanidine hydrochloride, tetramethylguanidine, 2,2-azobis (dimethyl-propionamidine)di-HCL...).

Appropriate correction is required.

Claims 1-4 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite because it states that the guanidine derivative is guanidine hydrochloride, however, this is a guanidine salt and the examiner is unclear as to if this is a guanidine derivative or not. Confusion as to what the guanidine hydrochloride is (salt or derivative) is therefore apparent. In addition, the grouping is not defined in a clear and concise

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manner and confusion as to what exactly is part of the grouping is apparent. The entire grouping should be reworded to clearly defined what is in the grouping.

Claim 4 is indefinite because it list compounds not within the scope of claim 1 (i.e. guanidine acetic acid would be a guanidine derivative, however, claim 1 defines the derivatives and this compound is not listed therein). In addition, this claim lists numerous other components that are already recited in claim 1. Finally, this claim defines amino guanidine hydrochloride, however, claim 1 only defines guanidine hydrochloride, thus a discrepancy is apparent between the hydrochloride component (if guanidine hydrochloride is a guanidine derivative, as recited in claim 1, it would also be expected that amino guanidine hydrochloride is a guanidine derivative but it is outside the scope of what is defined in claim 1).

The other claims are indefinite because they depend on indefinite claims.

In view of the indefiniteness of claims 1 and 4, it is strongly suggested that the grouping of the barrier removal agent be rewritten in a more concise manner (without duplication and/or contradiction).

Claims 1-4 and 11 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 of copending Application No. 10/830,268 (publication number 20050236601) for the same reasons set forth in the previous office action which are incorporated herein by reference.

Claims 1-4 and 11 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of copending

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Application No. 10/670,587 (publication number 20050070211) in view of Liu et al. (789) for the same reasons set forth in the previous office action which are incorporated herein by reference.

Claims 1-4 and 11 are rejected under 35 U.S.C. 103(a) as being obvious over Wang et al. (2003/0170991) alone.

Wang et al. teaches in the abstract sections [0015], [0016], [0025], [0027], [0028] and table 3, a polishing composition having the claimed pH (6.5) which comprises 0.1-30% of an oxidizing agent (claimed materials), 0.05-10% of a polishing additive (amines or imines or amino acids) and 5% or less of a quaternary ammonium salt. Table 3 defines that guanidine nitrate is used as the additive.

Although the primary reference does not literally state “imine derivatives”, the claimed materials are obvious because table 3 of the reference teaches a composition that the additive is **guanidine nitrate**. One reading the reference, as a whole, would have appreciated that **guanidine nitrate** can be the additive used in the broad composition as broadly disclosed by the reference.

With respect to the ammonium salt, the broad recitation of quaternary ammonium salt renders the claimed species obvious because the reference teaches in section [0029] that the stopping compound (quaternary ammonium salt) contains 4 or more carbon atoms and an alkyl group (claimed group) as is defined by the formula set forth on lines 29-35 of section [0029]. This formula reads on the claimed formula. In view of this formula, it is the examiners position that one skilled in the art would have appreciated that the recitation of quaternary ammonium

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salts of the primary reference would encompass the claimed ammonium salts. Although the primary reference does not literally define the selectivity, this aspect is obvious because it is the examiners position the composition of the reference is expected to yield this property because the composition is the same (contains the same materials in the same amounts) and the same composition is expected to provide the same results absent evidence to the contrary.

Claims 1-4 and 11 are rejected under 35 U.S.C. 103(a) as being obvious over Lee et al. (834-previously cited) in view of Wang et al. (2003/0170991).

Lee et al. (834) teaches in the abstract, column 4, line 3-column 5, line 68 and the claims, a polishing composition which comprises 0.1-10% of an oxidizing agent (claimed materials) and 0.01-30% of a polishing accelerator (claimed materials). It is stated that conventional additives (more than one additive) can be added to the composition, as long as they do not cause any adverse effect on the abrasive composition of the invention.

In view of the primary reference teaching that conventional additives can be added to the composition, it is the examiners position that this provides motivation to add an organic ammonium salt component because this is a conventional additive, as shown by the secondary reference. It is the examiners position that this component will not adversely affect the composition of the primary reference and therefore the use of this material is well within the scope of the skilled artisan and teachings of the primary reference. With respect to the selectivity, although the combined references do not literally define the selectivity, this aspect is obvious because it is the examiners position the composition of the reference is expected to yield this property because the composition is the same (contains the same materials in the same

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amounts) and the same composition is expected to provide the same results absent evidence to the contrary. With respect to the abrasive, although a small amount of abrasive is present in the primary reference, it is the examiners position that obviousness still exist because the ranges are close enough (slight difference) that one would not expect a difference in properties. *In re Woodruff* 16 USPQ 2d 1934 (Fed Cir 1990); *Titanium Metals Corp. v. Banner* 227 USPQ 773 (Fed Cir 1985) and *In re Aller* 105 USPQ 233 (CCPA 1955). With respect to claims 11, again the reference range for the abrasive is close enough that obviousness still exist because the ranges are close enough (slight difference) that one would not expect a difference in properties. In addition, claim 1 of the primary reference only define that an abrasive (no amount defined) is present and the broad interpretation of this is that the abrasive can constitute an extremely small amount (i.e. 0.00001%). This is apparent because a reference can be used for all teaches. In view of this, the above case law applies.

Applicant's arguments filed 1/15/07 have been fully considered but they are not persuasive.

Applicants argue that since claims 1-7 of copending Application No. 10/830,268 (publication number 20050236601) lack either a guanidine, hydrazine or their derivatives, this rejection is improper. This is not persuasive because this copending application clearly claims the use ammonium salt which is defined as a mixture of two materials one being tetramethylguanidine (i.e. claimed removal agent-see definition in specification).

Applicants argue that since claim 1-8 of copending Application No. 10/670,587 (publication number 20050070211) lack an ammonium salt, this rejection is improper. This is

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not persuasive because this copending application uses 0.05-25% of a nitrogen containing compound and this is defined as **tetramethylgaunidine**. Tetramethylguanidine is used as applicants ammonium salt (see section [0050]), thus the same component is used. Applicants also state that combining of references appears to represent a recognition that the claimed invention is patentably distinct. This is not a proper argument against the above rejection.

Applicants argue that Wang et al. (2003/0170991) does not teach the claimed specific salt. The examiner disagrees because the broad recitation of quaternary ammonium salt renders the claimed species obvious because the reference teaches in section [0029] that the stopping compound (quaternary ammonium salt) contains 4 or more carbon atoms and has alkyl groups as is defined by the formula set forth on lines 29-35 of section [0029]. This formula reads on the claimed formula. In view of this formula, it is the examiners position that one skilled in the art would have appreciated that the recitation of quaternary ammonium salts of the primary reference would encompass the claimed ammonium salts. In addition, although a formula might infer specific ammonium salts, applicants must clearly show reasons why the reference materials do not fall within the scope of the formula as claimed. Applicants apparently argue the selectivity (functional limitation, however, any arguments presented are not persuasive because although the reference does not literally define the selectivity, this aspect is obvious because it is the examiners position the composition of the reference is expected to yield this property because the composition is the same (contains the same materials in the same amounts) and the same composition is expected to provide the same results absent evidence to the contrary. Finally, any arguments based on Tsuchiya et al. are moot in view of the withdrawal of this reference from the rejection.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

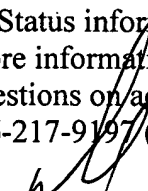
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

1/07
MM


Michael A Marcheschi
Primary Examiner